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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,045	10/24/2003	James W. Robins	11241-0031	1560

7590 07/28/2005

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EXAMINER

KASTLER, SCOTT R

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/693,045

Applicant(s)

ROBINS ET AL.

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

*[Handwritten signature]*

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-11 and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fradeneck in view of Maatsch. As applied to claim 1 above, Fradeneck shows a metal making lance assembly, where the term "assembly" denotes components employed together, but does not require the mechanical attachment together of all of the components, including a lance barrel and tip including a nozzle attached to the barrel (13) for discharging gaseous or particulates into vessel (10), a sensor feed tube (16) accommodating the passage of a disposable sensor (21), where the feed tube (16) is external, coaxial, parallel to the axis of, separate and isolated from fluid communication with the nozzle of lance (13), the sensor being suitable for the measurement of bath temperature (see claim 3 for example), and where the sensors comprise a plurality of sensors (see col. 3 lines 33-50 for example) that are loaded into the tube (16) by loading means (17) including sensor gripping means, and including control and data receiver means (28, 69 and 70) meeting the requirements of instant claims 20-22, where a flow of pressurized gas is introduced into the sensor tube (16) (see col. 2 lines 59-65 for example), thereby showing all aspects of the above claims except the disposition of the sensor and sensor feed tube within or carried by the lance barrel and connected to the lance tip. Maatsch teaches that at the time the invention was made, it was known in the lance art to arrange sensors (6) and attendant feed tubes (9, 11) inside of and carried by a lance barrel in order to more accurately

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monitor the reaction performance of the oxygen blowing process performed by the lance (1).

Because improved accuracy of the monitoring of the lance blowing operation would also be desirable in Fradeneck, motivation to arrange the sensor feed tube (16) and sensor arrangement interiorly of the lance (13), in the manner taught to be advantageous by Maatsch, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fradeneck in view of Maatsch. As applied to claim 1 above, Fradeneck in view of Maatsch shows all aspects of the above claims except the disposition of the sensor exterior of the lance barrel, although sensors located either interiorly or exteriorly of the barrel, as long as in close proximity to the barrel, are seen to operate in substantially the same manner with substantially the same results. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because it has been well settled that where, as in the instant case, no new or unexpected result is shown to arise therefrom, motivation to shift the location of a part shown by the applied prior art (the sensor) to any other location in the apparatus system, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See *In re Japikse*, 86 USPQ 70, and MPEP 2144.04 VI C. In the instant case, absent any demonstrated new or unexpected result arising therefrom, motivation to shift the location of the sensor shown by the combination of Fradeneck in view of Maatsch to any desired location, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

***Response to Arguments***

Applicant's arguments filed on 6/9/2005 have been fully considered but they are not persuasive. Applicant's argument that Maatsch does not teach a sensor isolated from fluid communication with the treatment gases issuing from the lance barrel is not persuasive because as stated above, Fradeneck is cited to teach this feature and the rejection of the above claims is based upon a combination of the teaching of both Fradeneck (a sensor for use with a lance where the sensor is carried by a separate barrel serving to isolate the sensor from any treatment materials issuing from the lance barrel) and Maastch (the desirability of placing the sensor within or near the lance barrel and carried by the lance barrel). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's further arguments regarding the rejection of the instant claims over Fradeneck alone, in view of applicant's amendments to the claims filed on 6/9/2005, are persuasive and these rejections have been withdrawn.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Scott Kastler  
Primary Examiner  
Art Unit 1742

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